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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,556	06/23/2003	Timothy S. Milliron	021751-001610US	1250
20350	7590	03/15/2006	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP			CHOW, JEFFREY J	
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DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/602,556	<b>Applicant(s)</b> MILLIRON, TIMOTHY S.	
	<b>Examiner</b> Jeffrey J. Chow	<b>Art Unit</b> 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004, 05 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/15/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 05 December 2005 have been fully considered but they are not persuasive.

Regarding rejected independent claim 21, the applicant recites the scope of the invention (page 9, paragraph 3) that is in the scope of Sclaroff's invention. Applicant then recites possible limitations of the invention that is not in claim 21 (page 9, paragraph 4), such as "the set of transformations may be independently received", "the set of strength fields and the set of weighting fields are decoupled and may be separately received", and these features and sets of transformations can cause infinite number of deformations on any undeformed model.

Applicant then describes Sclaroff's invention and the differences between Sclaroff's invention and the applicant's invention (pages 10 and 11). Sclaroff's invention does take a source image and a target image and transform the source image to the target image. The process of morphing the source image to the target image determines anchor points, which are used to determine the function for mapping other points from the source image to the target image and where the mapping function identifies the feature points in the target image as noted by the applicant (page 11, paragraph 1). The anchor points are weights of how to morph the source image to the target image. The transformations in Sclaroff's invention are shown in Figure 7 that includes magnitude for scaling which are the set of strength fields and are explained in column 15, line 14 – column 19, line 52).

In response to applicant's arguments, the recitation "warping" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not

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accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Though the claim may be steps of how to warp undeformed model, the claim is broad enough to give steps on how to transform models given a source data with source features and target data with target features. Transformations can warp models in size, shape, color, form, etc.

Applicant argues that Sclaroff's invention deals with animated features and Sclaroff's invention produces intermediate images (page 11, paragraph 3), but Sclaroff's invention is analogous art as it deals with transformation of 3-D objects.

In light of the above, the rejections hold and the pending claims 21 – 40 are rejected as these claims are not patentable due to 35. U.S.C. 102(b).

### ***Information Disclosure Statement***

The Information Disclosure Statement by the applicant filled on 05 December 2005 is objected due to the lack of drawings that were not fully displayed in "A Framework for Geometric Warps and Deformations in Computer Graphics" by Milliron. The reference must be presented in its entirety.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 21-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Sclaroff et al. (5,590,261)

Regarding claim 21, Sclaroff et al discloses that the claimed feature of a computer implemented method of generating a graphical warp through transformation of an undeformed model to a deformed model, the method comprising: receiving information specifying the undeformed model [i.e. “source-image source”; 20 in Fig 1]; receiving a set of feature specifications [i.e. “features in source and target”], each feature specification comprising a source feature and a target feature [i.e. “feature location”; 22 in Fig 1; column 9, line 64 – column 10, line 15 and column 22, line 16 and 17]; receiving a set of transformations [“transformation”, “mapping function”] for mapping the source feature to the target feature in each feature specification in the set of feature specifications [i.e. “feature point”] (See Fig 1, Fig 6-7, column 15, lines 14 - 67); receiving a set of strength fields defined over the undeformed model for scaling the magnitude of transformations [i.e. “scaling transformation” in Fig 7; column 16, lines 10 – 46] in the set of transformations to generate a set of scaled transformations; receiving a set of weighting fields defined over the undeformed model for determining the relative influence of the set of scaled transformations [i.e. “rigid-body,

deformational transformations” in Fig 7; “anchor points” in column 19, lines 36 - 52]; and generating the deformed model by applying the set of transformations [i.e. “scaling/rigid-body/deformational transformations”], the set of strength fields, and the set of weighting fields to the undeformed model. (See Abstract, Fig 1, Fig 6, Fig 7, column 22 – 24)

Regarding claims 22-23, Sclaroff et al discloses that the set of feature specifications comprises a first feature specification comprising a source feature identifying a source position [i.e. “source feature point”] of a continuous/discrete feature and a target feature identifying a target position [i.e. “target feature point”] of the continuous/discrete feature. (See Abstract, col 4 line 29-35, column 22 – 24)

Regarding claims 24-25, Sclaroff et al discloses that the set of feature specifications comprises a first feature specification comprising a source feature identifying a source position [i.e. “source feature point”] of a feature point/coordinate frame and a target feature identifying a target position [i.e. “target feature point”] of the feature point/coordinate frame. (See Abstract, col 4 line 29-35, column 22 – 24)

Regarding claims 26-27, Sclaroff et al discloses that the set of feature specifications comprises a first feature specification comprising a source feature identifying a source curve/surface [i.e. “source feature vector”] and a target feature identifying a target curve/surface. [i.e. “source feature vector”] (See Abstract, col 4 line 29-35, column 22 – 24)

Regarding claim 28, Sclaroff et al discloses that the set of feature specifications comprises a first feature specification comprising a source continuous feature and a target continuous feature, and a second feature specification comprising a source discrete feature and a target discrete feature. (See col 2 line 26-52, col 3 line 33-35, col 5 line 54-56)

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Regarding claim 29, Sclaroff et al discloses that computing a sum of the set of scaled transformations weighted by the set of weighting fields, for deforming the undeformed model to generate the deformed model. (See Fig 6-7, col 9 line 58-63, col 18 line 27-37)

Regarding claims 30 and 39-40, claims 30 and 39-40 are similar in scope to the claim 21, and thus the rejection to claim 21 hereinabove is also applicable to claims 30 and 39-40.

Regarding claim 31, refer to the claim 21 hereinabove, Sclaroff et al further disclose that the utilizing of sampling function to the set of transformations. (See col 3 line 32-42)

Regarding claims 32-33 and 37-38, claims 32-33 and 37-38 are similar in scope to the claims 30-31, and thus the rejections to claims 30-31 hereinabove are also applicable to claims 32-33 and 37-38.

Regarding claims 34-36, claims 34-36 are similar in scope to the claims 21-23, and thus the rejections to claims 21-23 hereinabove are also applicable to claims 34-36.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJC

  
ULKA CHAUHAN  
SUPERVISORY PATENT EXAMINER